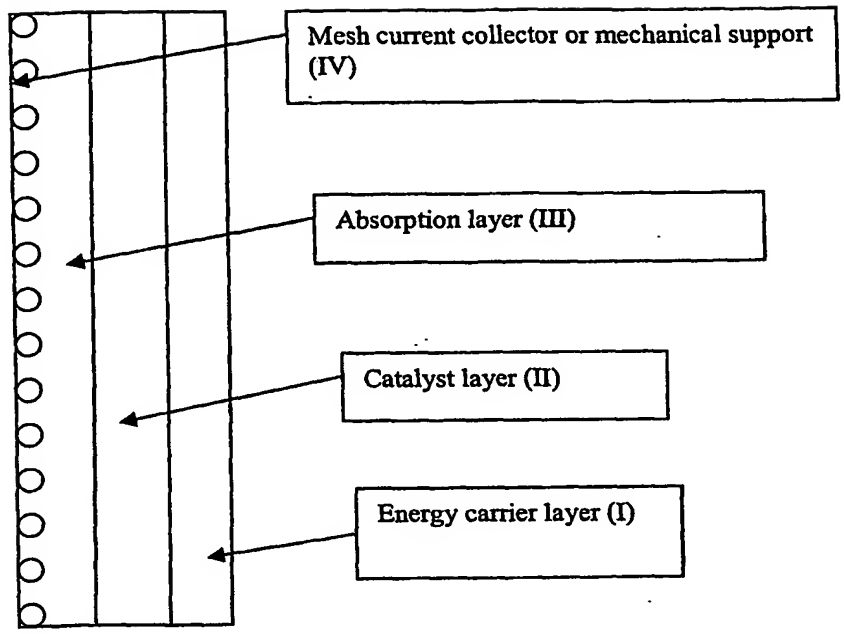

Figure 1. Illustration of a possible assembly method for the electrode by the use of several sheets with different properties.

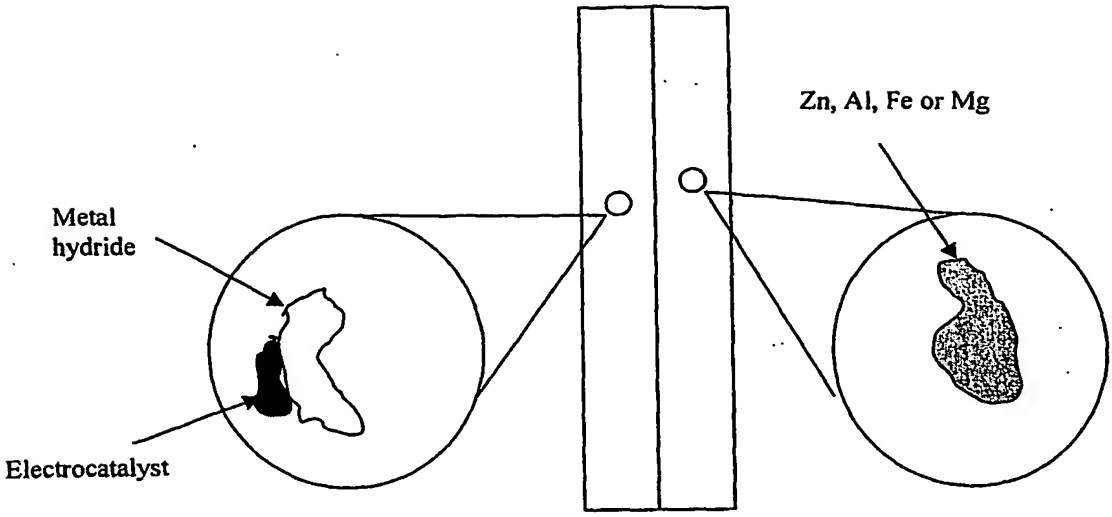

Figure 2. Illustration of electrode including the hydrogen absorber (metal hydride) and the electrocatalyst in one layer and the energy carrier (high energy density metal) in a separate layer.

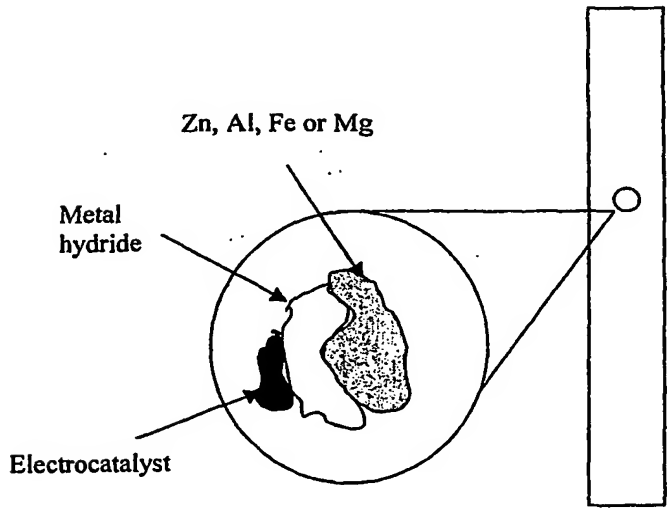

Figure 3. Illustration of electrode including the energy carrier (high energy density metals), the hydrogen absorber (metal hydrides) and the electrocatalyst.

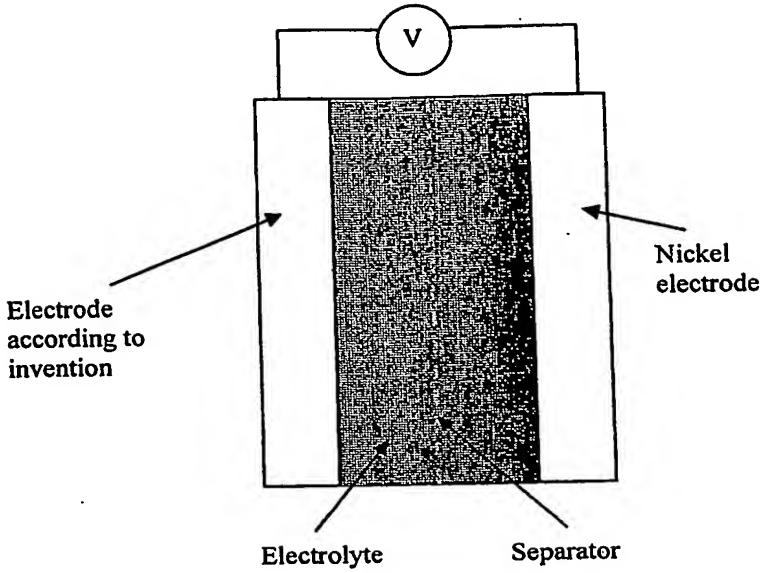

Figure 4. Invention used in a Nickel - Metal hydride battery.

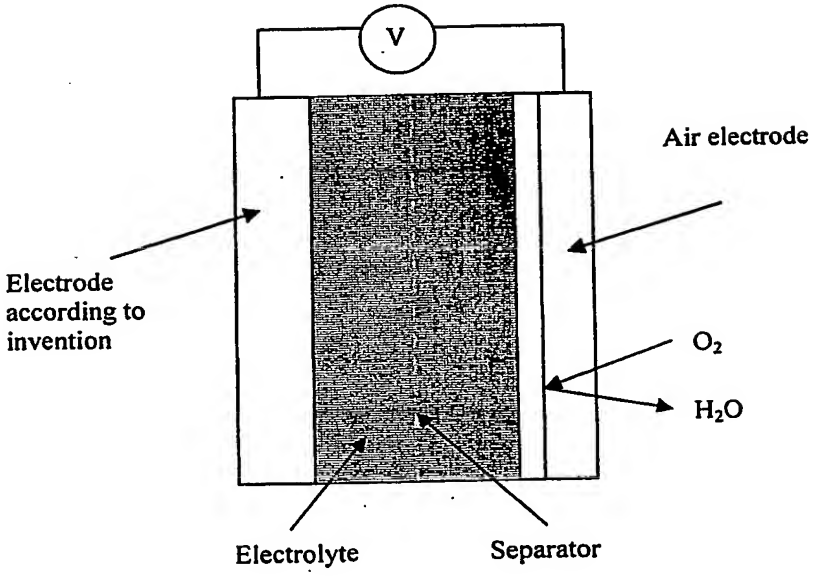

Figure 5. Invention used in a Metal – Air fuel cell.

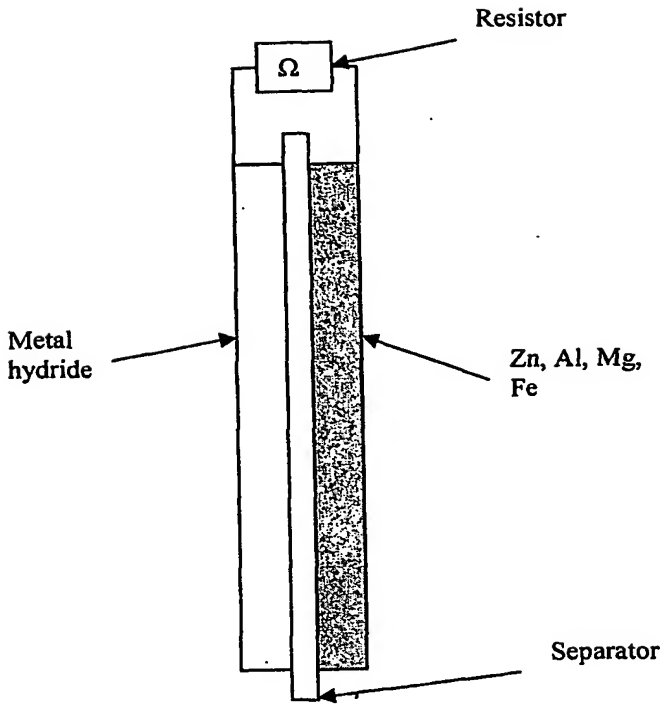

Figure 6. Illustration of a resistor connected between in the galvanic coupling between the metal hydride and the high energy density metals.

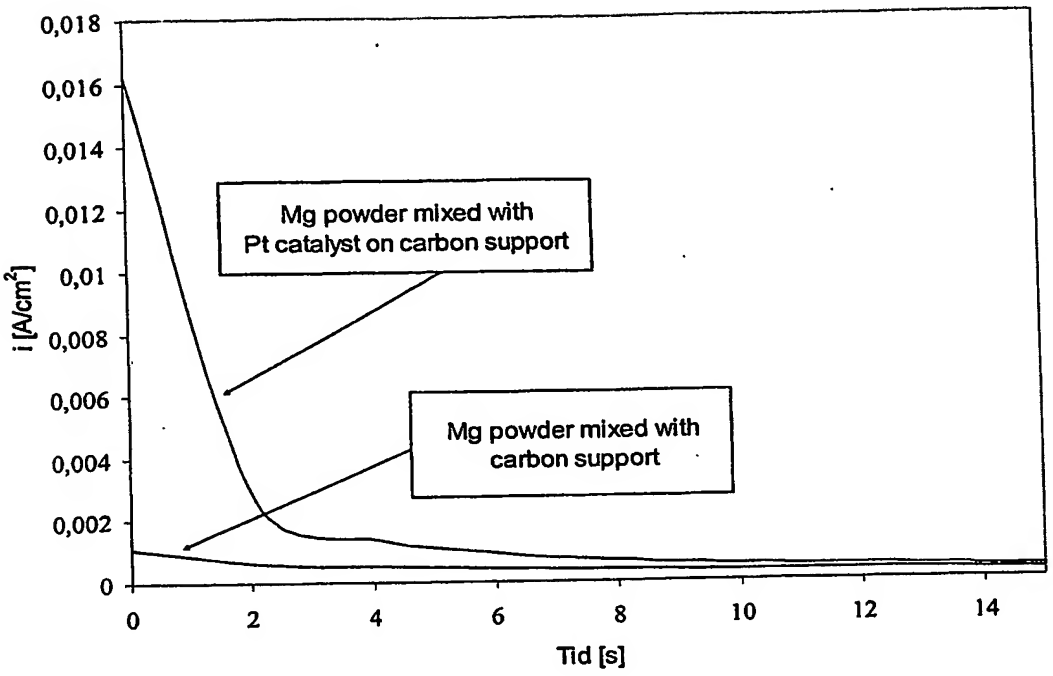

Figure 7. Current density for anodic polarisation of (+100 mV) of 20 wt% Mg mixed with 65 wt% carbon with and without 1 wt% Pt catalyst and 15 wt% PTFE. The electrolyte was 6.6 M KOH at 20 °C.

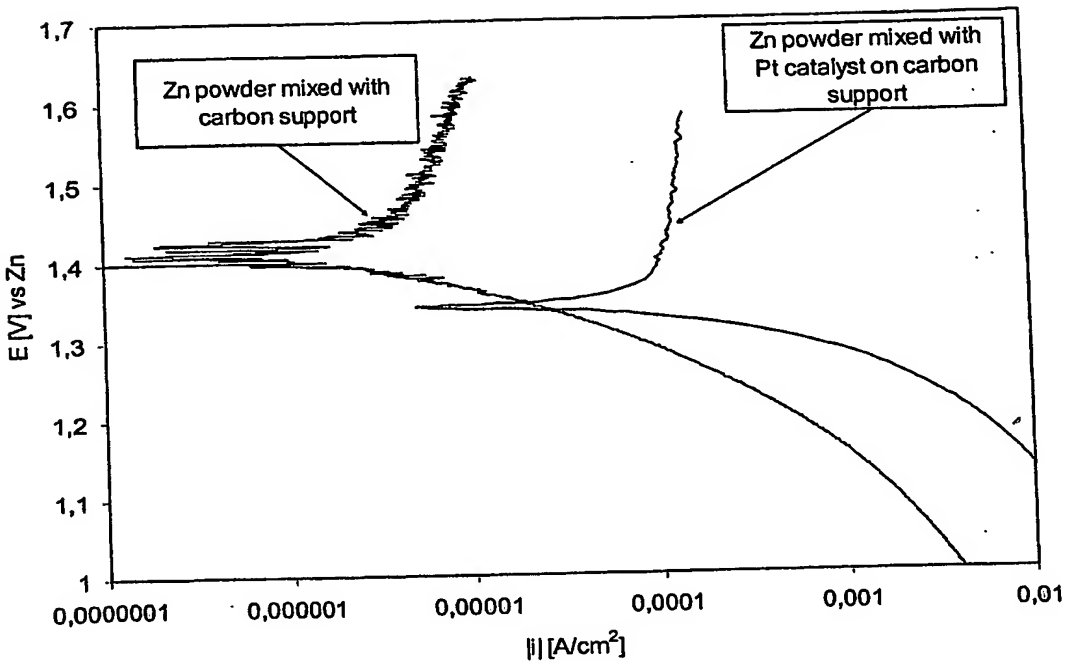

Figure 8. Polarisation sweeps of electrodes prepared from 20 wt% Zn, 65 wt% carbon support with or without 1wt% Pt catalyst and 15 wt% PTFE. The electrolyte was 6.6 M KOH at 20 °C.

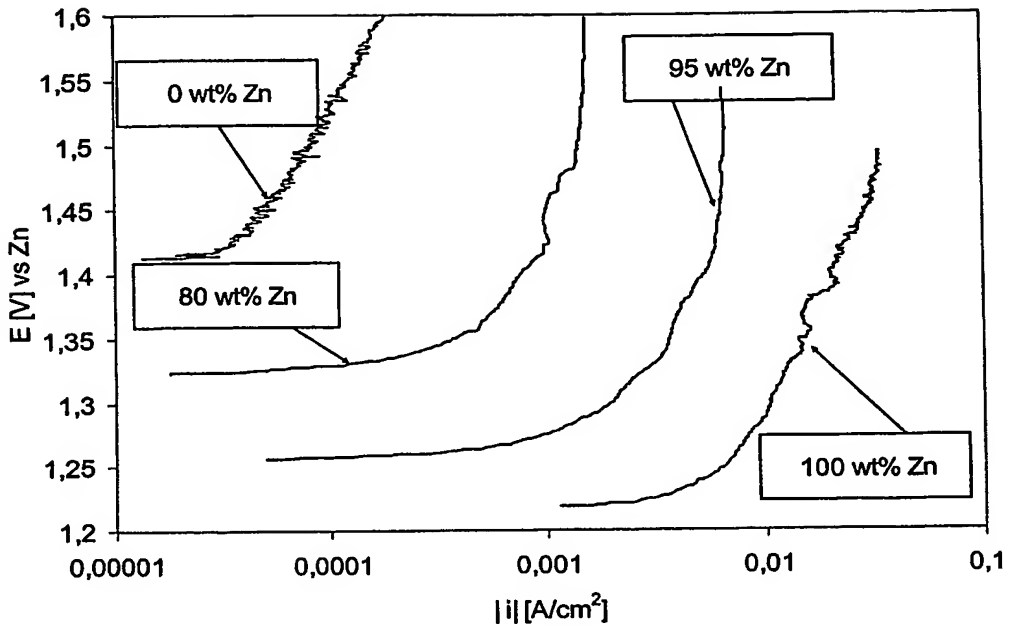

Figure 9. The rate of hydrogen oxidation in 6.6 M KOH at 20 °C on a PTFE bound carbon electrode with 1 wt% Pt catalyst on the carbon support. A hydrogen producing Zn electrode was pressed into the carbon electrode, however, separated by a isolating sheet that allowed gas diffusion. Hydrogen formed by corrosion of Zn reacts on the Pt catalyst of the carbon electrode. The amount of Zn in the Zn electrode was varied between 0 and 100 wt%.

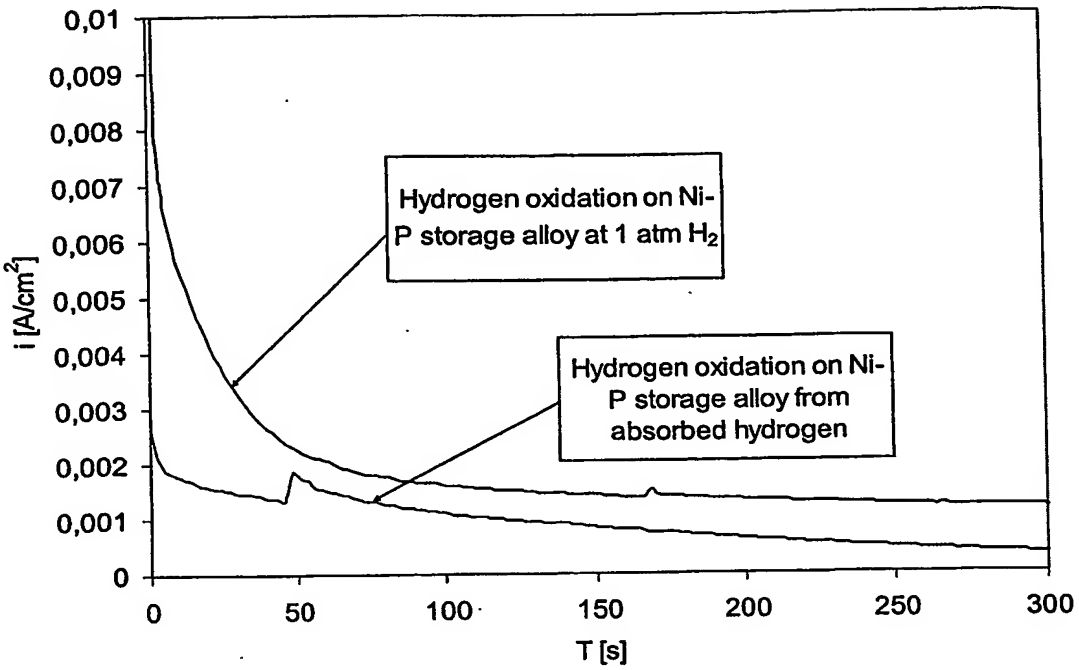

Figure 10. Hydrogen oxidation at overpotential of +100 mV in 6.6 M KOH on an electrode containing a Ni-P alloy that was deposited on Al and a carbon pore former. Corrosion of the Al produces hydrogen. This hydrogen was absorbed into the alloy. With anodic polarisation the absorbed hydrogen reacts on the surface. The current increases when additional hydrogen from the corrosion of an Al sheet is connected to the electrode